

CLAIMS

1. A method of authenticating a transaction initiated from a non-internet enabled device by a cardholder, the method comprising the steps of:

submitting a purchase request message from the non-internet enabled device over a first network to a mobile operator control means;

converting the purchase request message to a format that is readable by a virtual cardholder control means;

extracting a unique identifier from the purchase request message and matching it with a corresponding value stored in a remote database;

extracting cardholder data stored in the remote database;

sending an authentication request message to an Issuer access control means;

sending a purchase authentication page from the Issuer access control means to the virtual cardholder control means;

extracting displayable information and storing the purchase authentication page;

prompting the cardholder to enter his or her credentials;

converting the cardholder credentials to a format that is readable by the virtual cardholder control means;

-14-

parsing the stored purchase authentication page and recognizing the cardholder credential field(s);

inserting the credentials into the purchase authentication page;

sending the populated purchase authentication page to the Issuer access control means;

authenticating the cardholder credentials against an account holder database; and

responding to the virtual cardholder control means with an authentication response message.

2. The method of claim 1, which includes the further steps of:

forwarding the authentication response message to a Merchant control means;

decoding and validating the authentication response; and

generating an authorization request message and sending it to an Acquirer.

3. The method of claim 1, wherein the non-internet enabled device is selected from the group comprising: mobile telephones, landline telephones, Personal Digital Assistants (PDA's) and laptop computers.

4. The method of claim 1, wherein the technology used to submit a purchase request is taken from the group comprising: an Interactive Voice Response (IVR), Short message Services (SMS), SIM Toolkit

-15-

(STK), Unstructured Supplementary Services Data (USSD) and Wireless Application Protocol (WAP).

5. The method of claim 1, wherein the first network makes use of a plurality of wired and/or wireless network transport mechanisms to route the purchase request, the plurality of network transport mechanisms including GSM, CDMA, TDMA, GPRS, 3G, Bluetooth, Infrared, RFID and PSTN.
6. The method of claim 1, wherein the cardholder credentials are selected from a group comprising a PIN, user ID and/or password, a biometric reading, a pseudo random number, a cryptogram, and a digital signature.
7. A system for authenticating a transaction initiated from a non-internet enabled device by a cardholder, the system comprising:

a mobile operator control means including formatting means for converting a purchase request message received from the non-internet enabled device;

a first network for allowing the mobile operator control means to be in communication with the non-internet enabled device;

a virtual cardholder control means for receiving the converted purchase request message from the mobile operator control means, the converted purchase request message being in a format that is readable by the virtual cardholder control means;

an Issuer access control means for receiving an authentication request message from the virtual cardholder control means, the Issuer access control means being

-16-

arranged to generate and send a purchase authentication page from back to the virtual cardholder control means;

storage means for storing the purchase authentication page;

prompting means for prompting the cardholder to enter his or her credentials;

converting means for converting the cardholder credentials to a format that is readable by the virtual cardholder control means;

parsing means for parsing the stored purchase authentication page and recognizing the cardholder credential field(s); and

populating means for populating the purchase authentication page with the credentials, with the virtual cardholder control means then being arranged to send the populated purchase authentication page to the Issuer access control means to enable the Issuer access control means to authenticate the cardholder credentials against an account holder database and to then respond to the virtual cardholder control means with an authentication response message.

8. The system of claim 7, which further includes forwarding means for forwarding the authentication response message to a Merchant control means, which is arranged to decode and validate the authentication response and to then generate an authorization request message and send it to an Acquirer.
9. The system of claim 7, wherein the non-internet enabled device is selected from the group comprising: mobile telephones, landline

-17-

telephones and Personal Digital Assistants (PDA's), laptop computers.

10. The system of claim 7, wherein the technology used to submit a purchase request is taken from the group comprising: an Interactive Voice Response (IVR), Short message Services (SMS), SIM Toolkit (STK), Unstructured Supplementary Services Data (USSD) and Wireless Application Protocol (WAP).
11. The system of claim 7, wherein the first network makes use of a plurality of wired and/or wireless network transport mechanisms to route the purchase request, the plurality of network transport mechanisms including GSM, CDMA, TDMA, GPRS, 3G, Bluetooth, Infrared, RFID and PSTN.
12. The system of claim 7, wherein the cardholder credentials are selected from a group comprising a PIN, user ID and/or password, a biometric reading, a pseudo random number, a cryptogram, and a digital signature.
13. A method of authenticating a transaction initiated from a non-internet enabled device substantially as herein described and illustrated with reference to the attached drawings.
14. A system for authenticating a transaction initiated from a non-internet enabled device substantially as herein described and illustrated with reference to the attached drawings